

BEFORE THE CALIFORNIA ENERGY COMMISSION

In the Matter of,)
2013 Integrated Energy Policy Report)
(2013 IEPR))
_____)

Docket No. 13-IEP-1D
WORKSHOP
Re: Evaluation of Electricity
System Needs in 2030

**COMMENTS FROM THE LOS ANGELES DEPARTMENT OF WATER AND
POWER ON THE NOTICE OF IEPR LEAD COMMISSIONER WORKSHOP ON
EVALUATION OF ELECTRICITY SYSTEM NEEDS IN 2030**

September 3, 2013

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The Los Angeles Department of Water and Power (LADWP) respectfully submits these comments to further expand on the presentation provided by Mr. Michael Webster of LADWP, and further explain how the issues presented bring challenges to LADWP as it evaluates its power system needs moving into the future.

INTRODUCTION AND OPENING COMMENTS

The City of Los Angeles is a municipal corporation and charter city organized under the provisions of the California Constitution. LADWP is a proprietary department of the City of Los Angeles that supplies both water and power to Los Angeles inhabitants pursuant to the Los Angeles City Charter. LADWP is a vertically integrated utility that owns generation, transmission and distribution facilities. LADWP provides safe and reliable retail electrical energy to its approximately 1.4 million customers.

I. Comments

LADWP would like to thank the California Energy Commission Lead Commissioner for the workshop on the “Evaluation of Electricity System Needs in 2030”. This joint workshop provided LADWP and other stakeholders with the opportunity to discuss the development and influence of the uncertainties that will impact the resources and operational needs of California power system grid configurations for the future.

As previously stated by LADWP, the year 2020 and beyond to 2030, is presenting utilities across the state with deadlines to meet several mandates simultaneously. For LADWP, seventy percent of the power supply over the next 15 years will be replaced by making significant investments to eliminate Once-Through Cooling (OTC) for in-basin coastal generating units, replace base-load coal resources, comply with Cap-and-Trade regulations under Assembly Bill (AB) 32, increase its Renewable Portfolio Standard (RPS) to at least 33% by 2020, achieve at least 10 percent energy efficiency by 2020, and invest in its Power Reliability Program. Each mandate continues to be an extraordinary challenge in and of itself, and imposing them all at once is a monumental undertaking. In order to minimize the cost impacts and retain the reliability of the changing power grid, LADWP must carefully sequence the integration of these complex activities.

LADWP also notes that like many utilities, it is continuing to face significant pressure on the level of its rates increase that are necessary to fund many of the above mandated policies [also see LADWP’s 2012 Integrated Resource Plan (IRP) at <http://www.power-eng.com/content/dam/pe/online-articles/documents/2013/01/LADWPIRP.pdf>]. Thus, it is important that the Publicly-

Owned Utility (POU) governing bodies have the ability to make important financial decisions in regards to State policies, and have full discretion in making the necessary changes to their Renewable action plan, because ultimately, the burden of the cost and rate impact will be borne by our customers.

In these comments LADWP provides an overview of the issues it is facing to transform its resource portfolio, and also reinstates certain issues that need to be addressed by the State.

A. Once- Through Cooling (OTC)

The LADWP Grid Reliability Reports submitted to the State Water Resource Board (SWRB) have shown that in LADWP service territory, the OTC units are required for voltage support and stability to the local system. LADWP has an approved schedule with the SWRB that eliminates OTC by the year 2029, in order to manage and maintain reliability of its electrical grid. As noted in the workshop, the sequencing of the repowering activity is critical to the reliability of LADWP's power system, and it is addressed in more detail in LADWP's IRP.

B. Renewable Portfolio Standards

Currently LADWP utilizes renewable generation such as wind, solar, small hydro, and geothermal plants at several locations. LADWP's existing non-renewable resources have enough capacity to integrate current renewable energy level. It is expected that as LADWP moves into the future, solar and geothermal energy will play a greater role to fulfill its 33% by 2020 RPS goal, along with demand response and energy efficiency.

A major concern for LADWP continues to be the inherent risk associated with RPS regulatory uncertainty. For Example, developers continue to point to the biomethane moratorium implemented in March 29, 2012, which instituted economic impacts on historical decisions and left biomethane contracts in a “murky” state of eligibility. As a consequence, both POUs and developers refuse to accept legal and regulatory change liability due to the potential of not obtaining certification and/or appropriate Portfolio Content Category treatment.

The CEC and the State need to be cognizant that changes (whether they be considered miniscule or not) may have a sizable ripple effect on market requirement and procurement decisions made by POUs, and may impact compliance obligations.

C. Demand-Side Policies

From LADWP’s perspective, cost effectiveness is the key factor in setting incentive levels and determining which efficiency measures to include in programs. LADWP’s rates continue to be lower than those provided by most utilities in California and the economic downtown remains in a very slow recovery, so the ratepayers remain cautious to implement energy saving actions.

However, LADWP recognizes that Demand Response (DR) can provide various benefits to its power system, such as increased reliability, lower system costs, less impact to the environment, and an additional tool to integrate renewable energy. LADWP intends to develop a robust DR program, initially with a 5MW DR in 2013, eventually achieving 200 MW by 2020, and 500 MW by 2026. LADWP will initially focus its efforts on curtailment and direct load control, and then consider peak rebate, critical peak

and real-time pricing, amongst other options. Several of these programs are dependent on future rate tariff changes.

D. Renewable Energy Integration Challenges

As it is well known, utilities across the nation are currently facing several issues in considering integration of intermittent renewable resources into their systems. The ability to respond to fluctuations of Variable Energy Resources (VERs) has been mitigated by the LADWP with fast-start natural gas and hydro generation.

1) Energy Storage (ES) Option

As required by AB 2514 (Energy Storage Systems), LADWP is investigating Energy Storage technologies and will establish formal targets for implementation by October 1, 2014. LADWP will focus on programs and projects that support its unique electric grid resource plan, and projects that will facilitate renewable integration, and distributed generation and demand response implementation. As these programs are identified and their scope determined, they will be incorporated into the future strategic plans. However, significant challenges exist with the timing of the various policies and the need to make investments under regulatory certainty.

Currently LADWP is working with the Electric Power Research Institute (EPRI) to determine the state of ES technology, and the status of various demonstration projects. LADWP is also planning to seek consulting services to assist in ES assessment, and the development of an ES business plan. LADWP is also reaching out to other organizations, such as the Southern California Public Power Association (SCPPA), to seek collaboration opportunities in ES procurement.

2) Load Forecast Methodology

The uncertainty in load forecast, usage profiles, fuel pricing and projected renewable price forecasts, and other numerous modeling assumptions require further studies that must be refined and potentially reset the requirements. For example, compared to the prior forecast, projected electricity sales in calendar year 2020 decreased by 5.3 percent, mostly due to increased levels of energy efficiency and economic downturn.

3) Distributed Generation (DG)

LADWP is working to better understand the current and future impact of local DG and VERs on its distribution system; with increased uncertainty of demand/supply. Electrical System Operator must have visibility and levels of direct control to safely and reliably operate the grid. Anything less, implements levels of risk and uncertainty that should not be accepted in the options. Excess amounts of DG (i.e. during low-load conditions) without appropriate levels of control may result in problems controlling and operating the grid during multiple months of the year.

A better understanding of the impact of DG and VERs on the distribution system needs to be determined by utilities in the future to fully determine the impact to the reliability of the distribution system.

4) Future Flexibility and Tools Required

As pointed out during the workshop, more flexibility and diversity needs to be afforded to utilities to fulfill their RPS obligations, including allowing for more out-of-state gas and diverse renewable resources, while considering costs and potential for greatest GHG reductions.

Further, there is also a pressing need for better real-time renewable production forecasting, and tools to better predict voltage instability based on the variability of renewable energy.

5) Current Studies Being Pursued by LADWP

To reach its RPS goals, and to fully understand the potential impacts of the unpredictability of the output of renewable energy resources and to find solutions to such impacts, LADWP is pursuing the following studies:

- A transmission system study to determine maximum renewable energy penetration while the LADWP power system maintains reliable operation.
- A distribution system study to determine the impact of various distributed renewable energy levels and develop mitigation measures to deal with distributed renewable energy intermittency.
- Integration of renewable energy using transmission level Energy Storage measures.
- An operational study to determine future required amounts of reserved energy to integrate LADWP 2020 target renewable energy, and mitigation plan to deal with renewable energy intermittency.

These studies are important as they will address the key issues LADWP needs to resolve as it moves into its renewable energy goals; in particular, being able to determine the levels of renewable energy penetration at the bulk power and distribution system to allow operating the power system in a reliable manner. Further, the lack of rotating inertia as more remote solar projects are added to the system may create issues of voltage instability that must be studied. LADWP would like to

emphasize that resolution of these issues is imperative in order to reach 33 percent of renewable energy by 2020.

6) Energy Efficiency (EE)

Energy efficiency programs have been ongoing for more than a decade and will be serving a more prominent and strategic resource planning role as LADWP looks to the next 20 years and beyond. LADWP is committed to developing comprehensive programs with measurable, verifiable goals as well as implementing robust, cost-effective energy efficiency programs.

LADWP continues its commitment to energy efficiency through numerous programs and services to customers, encouraging the adoption of energy-saving practices and installation of energy-efficient equipment. Since 2000, LADWP energy efficiency programs have resulted in 1,377 GWh of energy savings, or over 5% of energy sales, and as noted above, LADWP's goal is to achieve 10 percent of electric sales by 2020.

7) Power Reliability Program

Designing and maintaining a robust Power System Reliability Program (PRP) that ensures delivery of reliable electric service now and in the future is crucial to both LADWP and rate payers.

The recently approved electric rate increase has secured limited funding for improving service reliability because a large portion of the funds are meeting regulatory requirements and providing energy conservation programs. Therefore, it is very important that the Department target specific infrastructure replacements that have the greatest impact on improving reliability.

The Power Reliability Program focuses in three areas: (i) cost-effectively prioritizing reliability expenditures, (ii) hiring and training field crews to replace people retiring from LADWP, and (iii) replacing aging poles, cables and transformers.

8) Carbon Dioxide (CO2) Emissions Reduction

LADWP will continue its efforts to reduce CO2 emissions. The potential early replacement of coal-fired generation is one means of achieving reductions of CO2 emissions. Additional recommended means of reducing CO2 emissions include the continuation and expansion of energy efficiency programs and transitioning towards increasing amounts of energy generated from renewable resources.

II. Conclusion

As LADWP stated during the workshop and in these comments, each mandate and activity being pursued by LADWP presents an extraordinary challenge in and of itself to LADWP. The mandates are interrelated, and imposing them all at once poses a monumental challenge. In order to minimize the cost impacts and retain the reliability of the power grid, LADWP will need to carefully integrate the sequence of these complex activities.

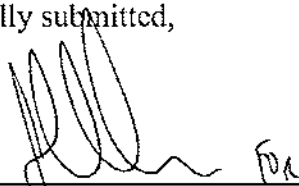
As explained above, LADWP would like to emphasize that, like many other utilities, it needs to resolve key issues before reaching 33 percent of renewable energy by 2020. These key issues include determining: (i) the maximum renewable energy penetration levels while maintaining the reliable operation of its Bulk Power and distribution systems, (ii) the most effective Energy Storage systems to integrate renewables, and (iii) levels of energy reserves required to integrate renewable energy reliably into the power system.

LADWP appreciates the opportunity to describe its efforts as it transforms itself and welcomes the opportunity to continue working with the Energy Commission in these proceedings going forward.

Dated: September 3, 2013

Respectfully submitted,

By: _____

A handwritten signature in black ink, appearing to read 'Randy S. Howard', is written over a horizontal line.

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